

LETTER

To the LEARNED

Caleb Cotesworth, M.D.

Fellow of the Royal Society, of the College of Physicians, and Physician to St. Thomas's Hospital.

Containing, A

COMPARISON

Between the Mortality of the

Natural Small Pox,

And that Given by

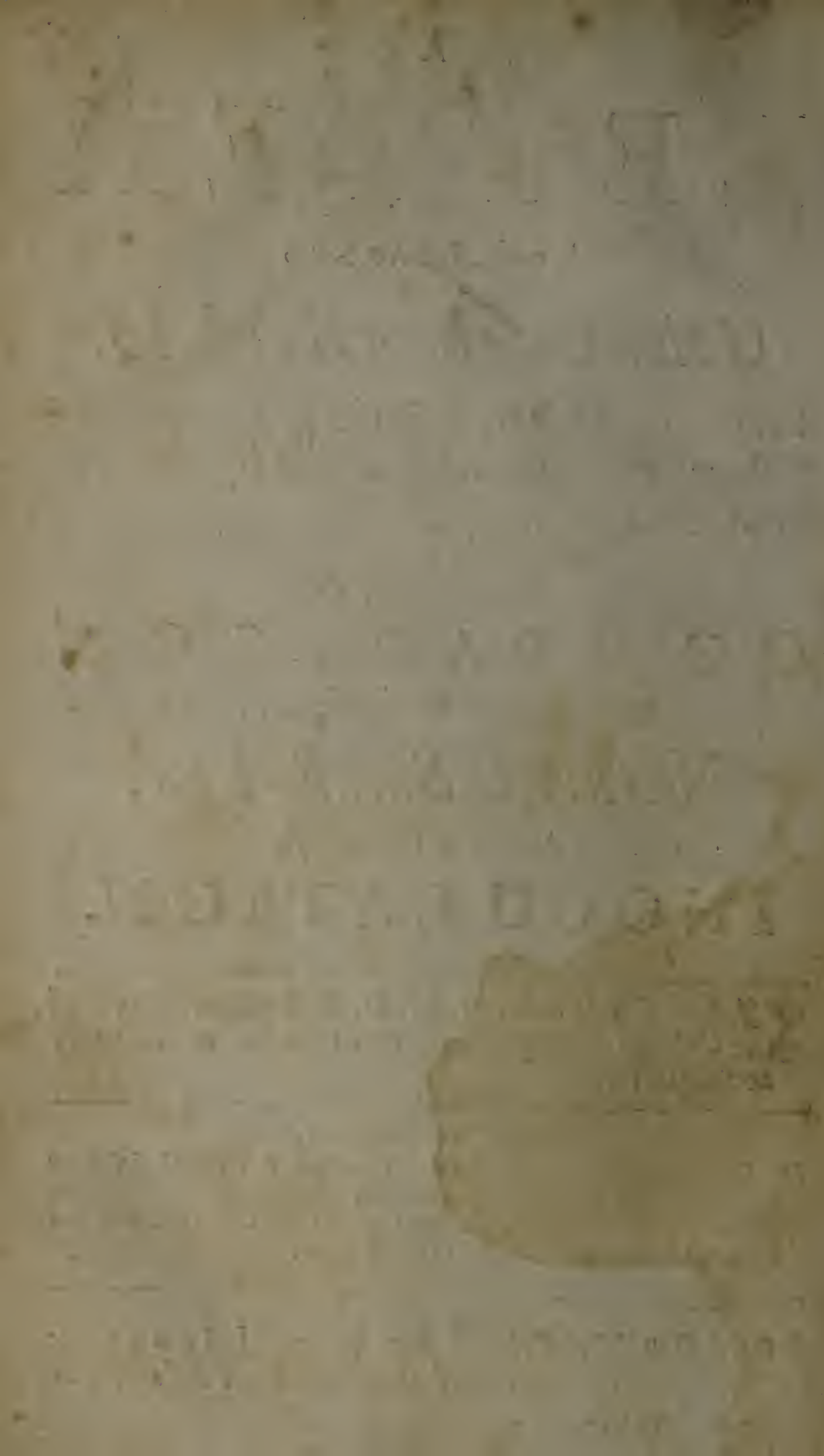
INOCULATION.

By *JAMES JURIN*, M. D. R. S. Secr. Fellow of the College of Physicians, and Lecturer of Anatomy at *Surgeons Hall*.

To which is Subjoined,

An Account of the Success of INOCULATION in *New England*; as likewise an Extract from several Letters concerning a like Method of communicating the SMALL POX, that has been used time out of mind in *South Wales*.

LONDON: Printed for W. and J. INNYS, at the *Prince's Arms* the West End of St. Paul's Church-Yard. 1723.





A
L E T T E R

To the LEARNED

Caleb Cotesworth, M. D.

S I R,



THE sincere and disinterested
Regard for the Good of Man-
kind, which you have always
manifested, as well in your
extensive private Practice, as
in that publick Post, which
you have so long and so use-
fully fill'd, must affect you, I am sure, with a
great and sensible Concern for the many sad
and deplorable Instances, that we so often
meet with, of the Severity of the Small Pox

Besides the Havock that it has made this last Year in other parts of the Kingdom, we have seen, within this City and Suburbs, above 100 Persons *per* Week, at a *Medium*, for some Months past, to be carry'd off by this Disease ; a Consideration certainly, that ought to dispose us to enter into any Measures, by which we may reasonably hope to put some Stop to the Progress of so cruel a Distemper.

To this Purpose, Sir, the Method of Inoculation, which has lately been introduced among us, is strongly recommended on the one hand, and has been opposed with a great deal of Warmth and Zeal on the other.

I have no Inclination to enter into this Controversy ; it is in better and abler Hands : but, as the Point in Dispute is of the utmost Importance to Mankind, I heartily wish, that, without Passion, Prejudice, or private Views, it may be fairly and maturely examin'd. In order to which, if the following Extracts and Computations, concerning the comparative Danger of the Inoculated and Natural Small Pox, may be of any Use to your self, or to other impartial and disinterested Judges, I shall think my Labour well bestowed.

The Number of Persons, who have had the Small Pox by Inoculation here in *England*, is, by the best Information I have been able to collect, as follows.

Inoculated

Inoculated by.

Dr. <i>Nettleton</i>	- - - - -	61
<i>Claud. Amyand</i> , Esq; Serjeant Surgeon	- -	17
Mr. <i>Maitland</i> , Surgeon	- - - - -	57
Dr. <i>Dover</i>	- - - - -	4
Mr. <i>Weymish</i> , Surgeon	- - - - -	3
The Reverend Mr. <i>Johnson</i>	- - - - -	3
Dr. <i>Brady</i> , at <i>Portsmouth</i>	- - - - -	4
Mr. <i>Smith</i> , Surgeon, and Mr. <i>Dymer</i> ,	} 13	
Apothecary, at <i>Chichester</i>		
Mr. <i>Waller</i> , Apothecary at <i>Gosport</i>	- -	3
A Woman at <i>Leicester</i>	- - - - -	8
Dr. <i>Williams</i> at <i>Haverford West</i>	- - - - -	6
Two other Persons near the same Place	-	2
Dr. <i>French</i> , at <i>Bristol</i>	- - - - -	1
In all —		182

Out of this Number the Opposers of Inoculation affirm, that two Persons died of the Inoculated Small Pox; the Favourers of this Practice maintain, that their Death was occasioned by other Causes. If, to avoid dispute, these two be allow'd to have died of Inoculation, we must estimate the hazard of dying of the Inoculated Small Pox, as far as can be collected from our own Experience, to be that of 2 out of 182, or one out of 91.

The Reverend Mr. *Mather*, in a Letter dated *March 10. 1721.* from *Boston* in *New England*, gives an Account, That of near 300 inoculated there, 5 or 6 died upon it or after it, but from other Diseases and Accidents, chiefly from having taken the Infection in the common way by Inspiration, before it could be given them in this way of Transplantation.

If, as we have done before, to avoid all occasion of dispute, we allow 5 out of these 300 to have died of the Small Pox by Inoculation, notwithstanding what Mr. *Mather* has said of their dying by other Accidents or Diseases ; the hazard of Inoculation will thence be determin'd to be that of 1 in about 60. But here it must be observ'd, that by all the Accounts from *New England*, the Operators there appear not to have been so cautious in the choice of their Subjects, as here in *England*. For Mr. *Mather* tells us, that the Persons inoculated were *young and old, from 1 Year to 70, weak and strong* ; and by other relations we are inform'd, that *Women with Child, and others even in Childbed*, underwent the Operation. Apparently the Greatness of the Danger they were in, from the Infection in the Natural Way, which then raged among them with the utmost Fury, made them the more adventurous.

We come now, Sir, to the second Part of our Design, which is to form an Estimate of the Hazard, which all Mankind, one with another, are under of dying of the natural Small Pox, that, by comparing this with the Hazard of Inoculation, the Publick may be enabled to form a Judgment, whether or no the Practice of Inoculation tends to the Preservation of Mankind, by lessening the Danger to which they are otherwise liable.

With this View I have consulted the Yearly Bills of Mortality, as far back as the Year 1667, being the Year after the Plague and the Fire of *London*, comprehending to the present Time the Space of 56 Years, from 42 of which I have given Extracts in the two following Tables.

The first of these takes in the first 20 Years, distinguishing for every Year the total Number of Burials, and likewise the Number that died of the Small Pox, in two separate Columns. The third Column shews, how many died of the Small Pox out of every Thousand that were buried; and the fourth Column represents the Proportion between those that died of the Small Pox, and the whole Number of Burials, by the nearest Vulgar Fraction, having always 1 for the Numerator.

The second Table gives the last 22 Years, after the same manner, and at the bottom of each Table is given the Total Number for each

each Series of Years, and likewise the Number that died each Year, taken at a Medium, one Year with another : by which it appears, that the Proportion between the Number of those that die of the Small Pox, and the whole Number of Burials, is very nearly the same, upon an Average for each Series of Years.

The 14 intermediate Years between 1686 and 1701 are left out, because in the Bills for those Years, the Accounts of the Small Pox and Measles are not distinguished, as in the preceding and following Years, but are join'd together in one Article, so that from them no certain Account can be drawn of the Number of Persons, that died of the Small Pox.

TABLE I.

Years	Total No of Burials	Died of the Small Pox.		
		In all.	In 1000	In Proportion.
1667	15842	1196	75	$\frac{1}{33}$
1668	17278	1987	115	$\frac{1}{9}$
1669	19432	951	49	$\frac{1}{20}$
1670	20198	1465	73	$\frac{1}{4}$
1671	15729	696	44	$\frac{1}{23}$
1672	18230	1116	61	$\frac{1}{16}$
1673	17504	853	49	$\frac{1}{21}$
1674	21201	2507	118	$\frac{1}{8}$
1675	17244	997	58	$\frac{1}{17}$
1676	18732	359	19	$\frac{1}{52}$
1677	19067	1678	88	$\frac{1}{11}$
1678	20678	1798	87	$\frac{1}{12}$
1679	21730	1967	91	$\frac{1}{11}$
1680	21053	689	33	$\frac{1}{31}$
1681	23971	2982	125	$\frac{1}{8}$
1682	20691	1408	68	$\frac{1}{15}$
1683	20587	2096	102	$\frac{1}{10}$
1684	23202	156	7	$\frac{1}{149}$
1685	23222	2496	107	$\frac{1}{9}$
1686	22609	1062	47	$\frac{1}{21}$
20 Years		28459	$71\frac{1}{2}$	$\frac{1}{14}$
Each Year at a Medium }		1423	$71\frac{1}{2}$	$\frac{1}{14}$
19910				

T A B L E II.

Years	Total N ^o of Burials	Died of the Small Pox.		
		In all.	In 1000	In Proportion.
1701	20471	1095	53	$\frac{1}{19}$
1702	19481	311	16	$\frac{1}{63}$
1703	20720	898	43	$\frac{1}{23}$
1704	22684	1501	66	$\frac{1}{15}$
1705	22097	1095	50	$\frac{1}{20}$
1706	19847	721	36	$\frac{1}{28}$
1707	21600	1078	50	$\frac{1}{20}$
1708	21291	1687	79	$\frac{1}{13}$
1709	21800	1024	47	$\frac{1}{21}$
1710	24620	3138	127	$\frac{1}{8}$
1711	19833	915	46	$\frac{1}{22}$
1712	21198	1943	92	$\frac{1}{11}$
1713	21057	1614	77	$\frac{1}{13}$
1714	26569	2810	106	$\frac{1}{9}$
1715	22232	1057	48	$\frac{1}{21}$
1716	24436	2427	99	$\frac{1}{10}$
1717	23446	2211	94	$\frac{1}{11}$
1718	26523	1884	71	$\frac{1}{14}$
1719	28347	3229	114	$\frac{1}{9}$
1720	25454	1440	57	$\frac{1}{18}$
1721	26142	2375	91	$\frac{1}{11}$
1722	25750	2167	84	$\frac{1}{12}$
22 Years		505598	36620	72
Each Year at a Medium. }		22982	1665	72
42 Years		903798	65079	72
Each Year in 42 at a Me- dium. }		21519	1550	72

By these Tables it appears, that *upwards of seven per Cent. or somewhat more than a fourteenth part of Mankind, die of the Small Pox*; and consequently the hazard of dying of that Distemper, to every individual born into the World, is at least that of one in fourteen. And that this Hazard encreases after the Birth, as the Child advances in Age, will appear from what follows.

From this Estimate it is demonstrable, that, in the Case of Persons actually having the Small Pox, the Hazard that they run, one with another, of dying of that Distemper, is greater than that of one in fourteen; or, which is the same thing, *there must be fewer than thirteen, that recover, for one that dies of the Small Pox*. For since one fourteenth part of Mankind die of the Small Pox, and the other thirteen parts die of other Diseases; if these thirteen have all had the Small Pox, and recover'd from it, before they fell ill of those other Diseases of which they died, then just thirteen will have recover'd from the Small Pox, for one that dies of that Distemper: but, as it is notorious, that great Numbers, especially of young Children, die of other Diseases, without ever having the Small Pox, it is plain, that fewer than thirteen must recover from this Distemper, for one that dies of it.

To determine exactly how many of these thirteen Parts of Mankind, die without having the Small Pox, is a very difficult Task: but it is easy to see, that a considerable Deduction is to be made from them.

In the first place, the two Articles of *Still-born* and *Abortive Children*, which are put into the yearly Bills, as part of the Number of Burials, are unquestionably to be deducted.

With these two, Sir, you will not I believe, think it unreasonable to join the following Heads, which, by the best Information I can procure, comprehend only very young Children, or at most not above one or two Years of Age. *Overlaid, Chrysoms and Infants, Convulsions, Horseshoehead, Headmoldshot, Teeth, Water in the Head, Worms, Rickets, Livergrown, Chin-Cough, and Hooping-Cough*, which Articles in the Yearly Bills for 22 Years last past, amount at a Medium to 386 in each 1000, of the whole Number of Burials.

It is true indeed, that, in all Probability, some small part of these must have gone thro' the Small Pox, and therefore ought not to be deducted out of the Account: but then, on the other hand, as it is certain, that of the remaining $\frac{614}{1000}$ of Mankind, there are great

Numbers,

Numbers, that never have the Small Pox, it will, I presume, be judged to be no unequal Supposition, if I suppose all that are contain'd under the Heads abovemention'd, to have miss'd that Distemper, when by way of Compensation, I allow all the remainder of Mankind to undergo it; which Concession is so large, that it will abundantly make up for what I assume too much in the former Supposition.

Allowing therefore, that out of every 1000 Children that are born, 386 die without having the Small Pox, and 72 do some time or other die of that Distemper; it follows, that the Hazard of dying of it, to the remainder of Mankind, who are all supposed to undergo that Disease sooner or later, is that of 72 out of 614, or nearly 2 out of 17 : *so that no more, than between 7 and 8, can recover from that Distemper, for one that dies of it.* And if any considerable part of the aforesaid remainder of Mankind, more than is allow'd for above, do escape having the Small Pox, then the Proportion of those that recover from it, will be still smaller.

This Consideration shews the Fallacy of one plausible Argument, that has been often made use of on occasion of the present Disputes about Inoculation : Which is, that whatever be the Danger of dying of the Small Pox, to those that actually have that Disease, yet,

yet, as great Numbers of Persons never have the Small Pox at all, this Danger is what any particular Person may never be in; and therefore it will be Madness to undergo the hazard of Inoculation, be it great or small, in order to prevent a Disease, which possibly may never befall one.

For if two parts in seventeen of all the abovesaid remainder of Mankind, must sooner or later die of the Small Pox, it is plain, that how many parts soever of these seventeen are supposed to escape that Distemper, the Mortality among the remainder, who undergo it, must in proportion be so much the greater. As for instance, if 7 parts escape having the Small Pox, and 10 undergo it, then 2 out of 10, or 1 out of 5, that have the Small Pox, must die of that Disease.

And as it can never be known, whether or no any particular Person be one of those, that are to have the Small Pox; his Hazard of dying of that Distemper, being made up of the Hazard of having it, and the Hazard of dying of it, if he has it, will be exactly the same, namely, that of 2 in 17, or 1 in 8 or 9, whether the proportion of Mankind, that escape having the Small Pox, be great or small.

But as what has been said concerning the Hazard of the natural Small Pox, is taken from an Account of 42 Years; whereas the
Hazard

Hazard of Inoculation is estimated only from what has happen'd in the space of about 18 Months, since which time it had its first Rise among us; it will perhaps be asked by some Persons, why we do not likewise make the Estimate of the hazard of the natural Small Pox, from the last two Years alone, without running back into so great a number of Years, before Inoculation was begun?

To which we answer, that the Proportion of those that die of the Small Pox, varies so much in different Years, as appears from the Tables above, that it was impossible to come at any Certainty in this point, from the consideration of the two last Years alone: and if any one suspects us of Partiality in proceeding after the manner we have done, he need only cast his Eyes upon the second Table, where he will find, that the Mortality of the natural Small Pox, for the two last Years, has considerably exceeded the *Medium* we have determin'd, from taking in two and forty Years.

There is another Method, which, if it were put in practice in several large Towns, or Parishes, and for a sufficient Number of Years, would enable us to come at a nearer and still more certain Computation of the Proportion between those that recover, and those that die of the Small Pox: which is, to send a careful Person once a Year, from house to house,

house, to enquire what Persons have had the Small Pox, and how many have died of it, in the preceding Year. This has been done by Dr. *Nettleton* the last Year, at several Towns in *Yorkshire*, &c. and the same was done at *Chichester* for the same Year, to the 15th of *October* last, by a Person of Credit, whose Account was communicated to me by my learned and ingenious Friend, Dr. *Whitaker*. Such another Account has been transmitted to me from *Haverford West*, in *South Wales*, by the Learned Dr. *Perrot Williams*, Physician in that Place. The Sum of these Accounts is as follows.

	Sick of the Small Pox.	Died.
Several Towns in <i>Yorkshire</i> - -	3405	- 636
<i>Chichester</i> — — — —	994	- 168
<i>Haverford West</i> — — — —	227	- 52
Total	4626	- 856

From which it appears, that, upon a *Medium* between these Accounts, there *died of the Small Pox almost 19 per Cent.* or *nearly one in five*, of Persons of all Ages, that underwent that Distemper. Which is the more to be remarked, for that *out of 82 Persons*, that had the Small Pox by Inoculation, the same Year, and in the Neighbourhood of the same Places, *not one miscarry'd*.

Mr. *Mather*

Mr. *Mather* observes, in his Letter mention'd above, that *out of more than 5000 Persons that had the Small Pox at Boston in New England, within little more than half a Year, near 900 died*, which is more than one in six ; and this Account added to those from *Yorkshire, Chichester, and Wales*, reduces the Proportion of those that die of the Small Pox to somewhat more than 18 *per Cent.* so that the Hazard of dying of that Distemper, to those who are taken ill of it, is that of *one in between five and six*, or something above *two in eleven*.

The Result therefore, Sir, of these Computations is, that, if the same Proportions should still continue, as have hitherto been determin'd by Observation, we must expect,

That of all the Children that are born, there will, some time or other, die of the Small Pox, *one in fourteen*.

That of Persons of all Ages taken ill of the natural Small Pox, there will die of that Distemper, *one in five or six, or two in eleven*.

That of Persons of all Ages inoculated, without regard to the Healthiness or Unhealthiness of the Subject, as was practis'd in *New England*, there will die *one in sixty*.

That of Persons inoculated with the same Caution in the choice of the Subjects, 'as has been used by the several Operators one with another, here in *England*, (if we allow in the

two disputed Cases abovemention'd, that the Persons died of the inoculated Small Pox) there will die *one in ninety one*.

But if those two Persons be allowed to have died of other Accidents or Diseases, then we shall have reason to think, as far as any Judgement can be made from our own Experience here in *England*, that *none at all* will die of Inoculation, provided that proper Caution be used; as we are inform'd, on all hands, is the Case in *Turkey*: where *out of many thousands*, that, in the space of about forty Years past, have been inoculated in and about *Constantinople*, by one *Greek Woman*, who still continues that Practice, notwithstanding her extreme old Age, *not so much as one Person has miscarried*, as I am assured by the ingenious *Dr. le Duc*, a Native of *Constantinople*, who was himself inoculated there under the Care of his Father, an eminent Physician in that City.

I am,

S I R,

Your most Obedient

Humble Servant,

and Obliged Kinsman,

Laurence-Pountney,
Lane, Feb. 20th,
172 $\frac{2}{3}$.

James Furin.

P O S T S C R I P T.

SINCE this Paper was drawn up and communicated to the Royal Society, the following Account of the Success of Inoculation in and about *Boston*, in *New England*, was procured at my Desire, by my Ingenious Friend Dr. *Nesbitt*, from Capt. *John Osborn*, who resided in that Town and Neighbourhood during the whole time of that Practice. I think proper to insert it here, as it confirms the Extract given above from Mr. *Mather's* Relation, and is a more particular Account of the Matter of Fact, than any that I have yet seen.

In *May*, 1721. the Small Pox was, by the Providence of God, brought into the Town of *Boston*; in *June* it began to spread pretty much, and in the Month of *July* it was got into most parts of the Town, and a considerable Number of People died of it. At this time Inoculation was first put in practice by Dr. *Boyleston*, who then perform'd it upon his own Child and a Negro-Servant, who both did well; notwithstanding which, this Attempt gave great Uneasiness to the Neighbours. However the Practice went on, to the Number of about 40 Persons, one of

which was a Woman * of about 40 or 45 Years of Age, who got well over the Small Pox, as her Husband publicly declared, but had been before troubled with Hysterick Fits, of which she died some little time after. When about 70 Persons had passed under the Operation, myself and Wife, who had hitherto been at a Place called *Roxbury*, a Mile from *Boston*, went into Town and received the Small Pox by Inoculation. We had it with all the Gentleness and Moderation that was possible, neither of us having an hundred Pustules, or being sensible of any Fever worth mentioning; so that we did not find it necessary to keep our Beds for it.

In *August* the Small Pox in the natural Way proved more mortal, and Inoculation made a greater Progress, the People continuing to come into the Practice of it. A second Person that died after Inoculation, was an Apothecary's Housekeeper, that was out of Town, till an *Indian* Maid got the Distemper in the same House, and remov'd, and died. Upon which this Woman coming to Town, her Master undertook to perform the Operation upon her, which by the Way was the first and last that he ever perform'd; and on the third Day after the Inoculation, the

* Mrs. Dixwell.

Small Pox came out upon her very full; from which it was plain, that she had taken the Infection before, in the common way.

The third Person that died after being inoculated, was a † Gentleman, that lodged in the same House with my Wife and self at *Roxbury*, who was under great and extreme Infirmary of Body, as myself was Witness, that we fear'd he would have lived but a short time under it. His Friends much persuaded him to make use of Inoculation, believing that it would have carry'd off his Illness; but when he made the Experiment, he had not Strength to go thro' with it. He was about 45 Years of Age, and by the way was a Gentleman of great Worth and Piety.

His Sister ‡ was the fourth Person that died upon this Operation. She was about forty Years of Age, of great Indisposition of Body, and weak, as was her Brother.

The fifth, that died upon Inoculation, was a Woman Servant in a House, where the whole Family, to the number of eight, were inoculated at the same time. She lay in a cold upper Room during her Illness, and was much neglected, the whole Family being down together, so that she died merely for want of a little Attendance. This was in

† John White, Esq;

‡ Mrs. Wells.

the Town of *Roxbury*, where observe, that 13 Men, Masters of Families, got the Small Pox, and all died; which inclined the People to make use of Inoculation, having before been much against it, and there were 43 Men inoculated there, who all did well. The * Minister of the Town was the first, that put it in Practice there, much against the Mind of his People at first, though afterwards they were very well pleas'd with it, seeing with what great Success it was attended; and then whole Families came into it, and underwent the Operation. There were in all at least 280 Persons inoculated, that I knew of, and I suppose there might be about 20 or 30 more, but of those I can give no certain Account.

John Osborne.

* *The Reverend Mr. Walter,*

Part

Part of two Letters concerning a Method of procuring the Small Pox, used in South Wales. From Perrot Williams, M. D. Physician at Haverford West, to Dr. Samuel Brady, Physician to the Garrison at Portsmouth.

HOWEVER new the Method of communicating the Small Pox may appear in this Kingdom ; yet I am to acquaint you, that it has been commonly practised by the Inhabitants of this Part of *Wales*, (*Pembrokeshire*) time out of mind, though by another Name, *viz.* that of buying the Disease, as I have been long ago acquainted by several, who procured the Distemper by that means. There is a married Woman, in the Neighbourhood of this place, who practised it on her Daughter, about a Year and an half ago, by which Means she had the Small Pox favourably, and is now in perfect Health, notwithstanding she has ever since, without Reserve, conversed with such as have had that Distemper this last Summer.

In order to procure the Distemper to themselves, they either rub the Matter taken from
the

the Pustules when ripe, on several Parts of the Skin of the Arms, &c. or prick those Parts with Pins, or the like, first infected with the same matter. And notwithstanding they omit the necessary Evacuations, such as Purging, &c. yet, as I am inform'd, they generally come off well enough ; and what's remarkable, I cannot hear of one Instance of their having the Small Pox a second time.

A Learned and very Ingenious Gentleman of this Country told me not long since, that above twenty Years ago, when at School, he and several of his Schoolfellows, (how many I don't exactly remember) infected themselves at the same time, from the same Person, and that not one of them miscarry'd, though he had more of the Small Pox than he design'd. I am satisfy'd he will readily give a more particular Relation of this Affair, if desired. I am sorry he happens at present to be at a considerable Distance from this Town, otherwise I would have been more exact in this Account.

Haverford West,
Sept. 28. 1722,

Perrot Williams;

I Should not have so long omitted the Return of my Thanks, for the Favour of yours of *Oct.* 15. but that I hitherto waited an Opportunity to speak with the Gentleman, whom I mention'd in my last. His Name is *Geo. Owen*, a Counsellor at Law, eldest Son to *Dr. Owen*, formerly Archdeacon in the Diocese of *St. David's*. He solemnly declares, that having, when at School, as I formerly said, rubb'd the Skin off his Left Hand, where the Scar is now very visible, with the back-Edge of his Penknife, till the Blood began to appear, he apply'd the variolous Matter to that part; which by Degrees growing inflamed, about a Week afterwards he fell into the Small Pox; and that he has since frequently conversed with such as were sick of that Distemper. He says also five or six more at least of his Schoolfellows made the like Experiment on themselves at the same time, with the like Success.

I have since talk'd with several more, who made the like Experiments on themselves, some twenty, some sixteen, &c. Years ago: who all positively affirm, they never had the Small Pox a second time.

Haverford West,
Nov. 23. 1722.

Perrot Williams.

*Part of a Letter from the same
Learned and Ingenious Gentleman,
upon the same Subject,
to Dr. Jurin, R. S. Secret.*

THE Business of my Profession obliging me to go into the Country, as soon as I had the Favour of yours of *Jan. 22.* prevented my returning an Answer sooner to the Queries you are pleas'd to propose.

I have little to add to what I have already mention'd to Dr. *Brady*, concerning the manner of communicating the Small Pox, more than that Mr. *Owen* was about fifteen Years of Age, when he made the Experiment on himself, and that he questionless had the genuine Small Pox; the Signs of 'em on his Face, and the Mark on his Hand, where he apply'd the Matter, being still so very visible, as to put that matter beyond dispute. The Physician, who then attended him, is dead. Tho' I can't pretend to remember how many inform'd me of their procuring the Distemper in this manner; yet I can aver, that within the compass of twenty Years last past, I have
been

been so often assur'd of the Truth of it, not by Children, but grown Persons of un-
 doubted Credit, that I am entirely satisfied it
 has been an immemorial Custom in these
 Parts ; and not only practis'd by Boys when
 at School, but also by many others of both
 Sexes more advanced in Years, and conse-
 quently capable of distinguishing the Small
 Pox from other Distempers. There are now
 living, in this Town and Neighbourhood,
 five or six Persons, who undoubtedly had that
 Distemper after taking the foresaid Method to
 infect themselves ; one of whom, a young
 Woman aged 23, told me (since I received
 your Letter) that, about 8 or 9 Years ago, in
 order to infect herself, she held twenty pocky
 Scabs (taken from one towards the latter end
 of the Distemper) in the hollow of her Hand,
 a considerable time ; that about ten or twelve
 Days afterwards she sicken'd, and had upwards
 of thirty large Pustules on her Face, and other
 Parts ; and that she has since freely conversed
 with such as have had the Small Pox on them.

To make it appear that Inoculation is a suf-
 ficient Preservative against receiving the Small
 Pox a second time ; about six Weeks ago, I
 caused my two Boys, who had been inocula-
 ted this last Summer, not only to see, but even
 to handle a Child, dying of a most malignant
 sort of Small Pox ; who notwithstanding, I
 thank God, continue in perfect Health.

Upon a very exact Inquiry I find, that out of 227 who have had the Small Pox in the natural Way, in this Town and a neighbouring Parish, since the Beginning of *June* last, 52 have died.

Haverford West,
Feb. 2. 172 $\frac{2}{3}$.

Perrot Williams.

Postscript.

Just as I was concluding my Letter, being sent for by a Gentleman about six Miles off (where I saw two very melancholy Instances of the Severity of the confluent Small Pox) he took an occasion to inform me, that a near Neighbour of his caus'd his Son, about ten Years of Age, near three Weeks ago, to buy (as he term'd it) the Small Pox, after the manner I described in my first Letter to Dr. *Brady*. Carefully viewing the Boy, I found him recovering from the distinct Kind of that Distemper, having not had, as I cou'd perceive, above 40 pretty large Pustules, which were then drying off. Had I not been scanted in Time, I question not but I should have been able to have given a great many Instances of the like Nature; but the hurry I have been continually in, ever since I receiv'd yours, must be my Apology, for that Deficiency, as well as the Uncorrectness of this Letter.

A Letter

A Letter on the same Subject, from Mr. Richard Wright, Surgeon at Haverford West, to Mr. Sylvanus Bevan, Apothecary in London.

I Received yours the 9th instant, and, in Answer to it, will readily give you all the Satisfaction I can, in relation to a very ancient Custom in this Country; commonly called *buying the Small Pox*, which, upon a strict Enquiry, since I had your Letter, I find to be a common Practice, and of a very long standing; being assured by Persons of unquestionable Veracity, and of advanced Age, that they have had the Small Pox communicated to themselves this way, when about sixteen or seventeen Years of Age; they then being very capable of distinguishing that Distemper from any other; and that they have parted with the Matter contain'd in the Pustules to others, producing the same Effects. There are two large Villages in this County near the Harbour of *Milford*, more famous for this Custom than any other, namely, *St. Ishmael's* and *Marloes*. The old Inhabitants of those Villages, (with which they abound, being in a healthful Situation) say, that it has been a common Practice with them time out of mind,

and

and what was more remarkable, one *William Allen*, of *St. Ishmael's*, ninety Years of Age, (who died about six Months ago or thereabouts) declared to some Persons of good Sense and Integrity, that this Practice was used all his Time; that he very well remember'd his Mother's telling him, that it was a common Practice all her Time, and that she got the Small Pox that way. These, together with the many other Informations, I have met with from almost all parts of the County, confirm me in the Belief of its being a very ancient and frequent Practice, among the common People; and to prove that this Method is still continued among us, I will give you the relation of an elderly Woman, a Midwife, who accidentally came into Company, when your Letter was reading, whose Name is *Joan Jones*, aged seventy Years, of good Credit, and perfect Memory. She solemnly declares, that about fifty four Years ago, having then the Small Pox, one *Margaret Brown* (to the best of her remembrance then about twelve or thirteen Years of Age) bought the Small Pox of her; that the said *Margaret Brown* was seized with the Small Pox a few Days afterwards; that the said *Margaret Brown* had not had the Small Pox a second time, a twelve-Month ago, and she verily believes that she has not had them since. She farther says, that she has known this way of procuring the Small Pox practised from
time

time to time, above fifty Years; that it has been lately used in her Neighbourhood, and that she knows of but one dying of the said Distemper, when communicated after the Method aforesaid, which Accident happened within these two Years last past; the Person who miscarried (a young Woman about twenty Years of Age) having procured the Distemper from a Man then dying of a very malignant Small Pox. The above Relation I heard the old Woman declare two Days ago, and she was willing to take her oath of it before Dr. *Williams* who is a Magistrate. As to what you mention concerning the manner of communicating the infectious Matter to the Blood, by scraping the Skin thin with a Penknife, and so rubbing in the Matter, that was only the Case of one particular Gentleman, Mr. *Owen*, a Counsellor at Law, whom I heard several times positively affirm, that he bought the Small Pox when at School, and of such a Lady, now living, and gave her three Pence for the Matter contained in 12 Pustules. That hundreds in this Country have had the Small Pox this way is certain; and it cannot produce one single Instance of their ever having them a second time.

Haverford West,
Feb. 15. 172².

Richard Wright.

Books printed for WILLIAM and JOHN INNYS.

I. Philosophical Transactions, No. 374. for *November* and *December*, 1722. continued and publish'd by Dr. *Jurin* and Mr. *Machin*, Secretaries to the Royal Society, 4^{to}. Where may be had a compleat Set in 30 Vols, or most of the Numbers separately.

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